

This listing of claims will replace all prior versions, and listings, of claims in the application.

**Listing of Claims:**

1. (Previously Presented) A method of billing a telephone call made through a shared local access network that shares at least one modem in a shared modem pool among multiple users, the method comprising:

receiving a request from one of the users of the shared local network to place an outbound telephone call through the shared modem pool to a public telephony network, wherein the request includes a telephone number of the user, and wherein the shared local access network and shared modem pool together provide shared access to the public telephony network and are located to receive the outbound telephone call before it accesses the public telephony network;

before the telephone call is placed through the shared modem, authenticating the request as coming from a valid user of the shared local access network based at least in part on user identifying information for the user, and without requesting and requiring user input before each telephone call, wherein the authenticating is not performed at a destination associated with the telephone call, and wherein the telephone call placed through the shared modem pool to the public telephony network includes the user's telephone number in addition to any telephone number associated with the shared modem pool;

correlating the user identifying information with billing information associated with the user, including the user's telephone number; and

forwarding call charge information from the public telephony network so that the user is billed for the call, while other users of the shared modem pool are separately billed for telephone calls they place.

2. (Previously Presented) The method recited in claim 1, wherein the correlating step comprises the step of searching a database comprising records of user identifying data for all valid users of the shared local access network.

3. (Previously Presented) The method recited in claim 2, wherein the searching step comprises the step of comparing the user identifying information to the billing

information associated with the user, and authenticating the user when the user's user identifying data matches the billing information.

4. (Previously Presented) The method recited in claim 3, further comprising the step of passing the telephone call through the network after the user identifying information is authenticated.

5. (Previously Presented) The method recited in claim 4 wherein the shared local access network comprises a fixed wireless network.

6. (Previously Presented) A method of processing a request through a shared local network to place a telephone call via a modem, comprising:

receiving user identifying information associated with a user that has made the request through the shared local network to place the telephone call via a modem pool, and wherein the receiving user identifying information is performed without requesting or requiring user input before each telephone call, wherein the user shares the modem pool and the local network with multiple other users, wherein the modem pool shared with the other users provides access to a public telephony network, and wherein the user and at least some of the multiple other users have unique telephone numbers, and wherein the shared local network and modem pool are positioned before the telephone call accesses the public telephony network;

before placing the telephone call via the modem pool shared with the other users, searching a database containing information related to users of the shared local network to correlate the user identifying information with the user and to authenticate the user as a valid user of the shared local network, wherein the database is coupled to receive data from the shared modem pool;

if the user is authenticated as a valid user of the shared local network, forwarding call charge information from the public telephony network so that the user is billed for the call; and

placing the telephone call via the shared modem pool, wherein placing the call includes forwarding the unique telephone number of the user to the public telephony network, with any telephone number associated with the modem pool, to permit the public telephony network to provide appropriate billing information for the user who placed the telephone call.

7. (Previously Presented) The method recited in claim 6, wherein the searching further comprises comparing the user identifying information with records of billing information stored in the database.

8. (Previously Presented) The method recited in claim 7, further comprising billing the user for the telephone call when the user has been authenticated as a valid user of the shared local network.

9. (Previously Presented) The method recited in claim 8, wherein the shared local network comprises a wireless network.

10. (Previously Presented) A computer system that utilizes a modem for processing calls received from an access network and made to a public telephony network, the computer system comprising:

a server able to receive user identifying information associated with a user of the access network that has requested to place a telephone call to the public telephony network via a shared modem pool and able to, after the user has been authenticated as a valid user, place the telephone call via the shared modem pool and without requesting user input before each telephone call, wherein the server is able to obtain a phone number associated with the user via the telephone call, and to provide the user's telephone number to the public telephony network in addition to any telephone number associated with the shared modem pool, and wherein the user shares with other users access to the public telephony network via the access network and shared modem pool that both precede access to the public telephony network;

a search module able to search a database containing information related to users of the access network in order to correlate the user identifying information with the user and authenticate the user as a valid user and able to notify the server of authentication of the user, wherein the search module, database, or both are at an intermediate location with respect to the access network and the public telephony network, and not at a source or destination associated with the telephone call, and wherein the search module is configured to provide the user's telephone number if the user's telephone number is not provided via the telephone call; and

a billing aggregator module able to aggregate charge call information received from the public telephony network and the user identifying information so that the user is billed for the call.

11. (Previously Presented) The computer system recited in claim 10, further comprising a correlating module for comparing the user identifying information with records of user billing information stored in the database.

12. (Previously Presented) The computer system recited in claim 11, further comprising a billing module in communication with the correlating module for billing the user for the telephone call when the user has been authenticated as a valid user.

13. (Previously Presented) The computer system recited in claim 12, wherein the access network comprises a fixed wireless network.

14. (Previously Presented) The computer system recited in claim 10, further comprising a shared modem pool with multiple modems that is accessible over the access network to each of multiple users of the access network.

15. (Previously Presented) A computer-readable medium whose contents cause a computing device to handle a telephone call made via a modem through a network, by performing a method comprising:

receiving a request from a user of the network to place a telephone call via a shared modem pool having multiple modems, wherein the request includes a telephone number associated with the user, and wherein the user shares access to a public telephony network via the network and shared modem pool that both precede access to the public telephony network;

receiving user identifying information to authenticate the request as coming from a valid user of the network, and wherein the receiving user identifying information is performed without requiring user input before each telephone call, and wherein the authenticating is substantially performed not at a destination associated with the telephone call;

if the user identifying information received is authenticated, correlating the user identifying information with billing information associated with the user;

placing the telephone call via one of the modems of the shared modem pool and providing the user's telephone number in addition to any telephone number associated with the shared modem pool; and

billing the user for the call based at least in part on the billing information associated with the user and on call charge information for the placed telephone call that is received from the public telephony network based on the user's telephone number.

16. (Previously Presented) The computer-readable medium of claim 15 wherein the modems of the shared modem pool are connected to the public telephony network, and wherein the placing of the telephone call via the modem includes supplying the billing information associated with the user to the public telephony network.

17. (Previously Presented) The computer-readable medium of claim 15 wherein the network comprises a wireless network.

18. (Previously Presented) The computer-readable medium of claim 15 wherein the method is performed for each of multiple users of the network.